

**CHEILOSIA RANUNCULI DOCZKAL (DIP.: SYRPHIDAE)
IN BRITAIN**DAVID GIBBS¹ AND COLIN W. PLANT²¹6 Stephen Street, Redfield, Bristol BS5 9DY. (E-mail: davidgibbs@aol.com)²14 West Road, Bishops Stortford, Hertfordshire CM23 3QP. (E-mail: Colinwplant@compuserve.com)**Introduction**

OVER THE PAST FEW YEARS, both of us have slowly become aware that there was a degree of morphological variation amongst examples of the extremely common hoverfly *Cheilosia albitarsis* Mg. During 2000, one of us (Gibbs, 2000) drew attention to the possibility that this might actually comprise two species in Britain, labelling them form A and form B, and noted that European workers were currently researching this situation. During February 2001, the problem was eventually resolved by the publication of the split of *C. albitarsis sensu* Meigen into two new taxa, *C. ranunculi* (form A *sensu* Gibbs) and *C. albitarsis sensu* Doczkal (form B *sensu* Gibbs) (Doczkal, 2001).

Doczkal's paper referred to the presence of both species in Britain, citing as sources both Martin Speight (1993, *in lit.*) and Gibbs (2000). Since both species fly together from early May onwards, we take this opportunity to draw the known existence of *C. ranunculi* in Britain to the attention of a wider audience in advance of the impending field season, so that entomologists may be able to take maximum advantage of the information.

It is also appropriate to provide a few brief notes on the separation of *C. ranunculi* from *C. albitarsis sensu* Doczkal. It should be noted that because type specimens are either lost or are females, Doczkal applied the name *albitarsis* to the more widespread species; for this reason, we refer to this segregate as *sensu* Doczkal, as distinct from *sensu* Meigen.

Summary of known British records of *Cheilosia ranunculi*

The following records are presented in order of the date of the record:

Older records

No locality, 21.v.1889, C. J. Watkins (Bristol City Museum);

No locality, 13 .v.1890, C. J. Watkins (Bristol City Museum);

No locality, 24.v.1890, C. J. Watkins (Bristol City Museum);

nr. Painswick, Gloucestershire (VC 34), 28.iv.1893, C. J. Watkins (Bristol City Museum);

Island, K. Mill, Gloucestershire (VC 34), 14.v.1894, C. J. Watkins (Bristol City Museum);

K. Mill, Gloucestershire (VC 34), 09.v.1897, C. J. Watkins (Bristol City Museum);

Tickenham, Somerset (VC 6), vi.1921, H. L. F. Audcent (Bristol City Museum);

Shapwick, Somerset (VC 6), 20.v.1923, H. L. F. Audcent (Bristol City Museum);

Tickenham, Somerset (VC 6), 16.v.1925, H. L. F. Audcent (Bristol City Museum);

Kingsweston, Gloucestershire (VC 34), 02.v.1926, H. L. F. Audcent (Bristol City Museum);

Olveston, Gloucestershire (VC 34), 29.iv.1927, H. L. F. Audcent (Bristol City Museum);
Sharpham, Somerset (VC 6), 2.vi.1936, H. L. F. Audcent (Bristol City Museum);
Thames M'rs[Marshes], Abbey Woods, Greater London [West Kent] (VC 16),
4.vi.1938 (BENHS collection);
Clevedon, Somerset (VC 6), 22.iv.1945, H. L. F. Audcent (Bristol City Museum);
Location illegible, 9.v.1947, C. O. Hammond (BENHS collection)
Bicknoller, Somerset (VC 5), 23.iv.1948, H. L. F. Audcent (Bristol City Museum);
Breamore, Hampshire (VC 11), 4.v.1950 (BENHS collection)
Whippendell Woods, Hertfordshire (VC 20), 10.v.1968, C. O. Hammond (BENHS
collection).

Recent records

Benfleet Downs, South Essex (VC 18), TQ 795859, 13.v.1980, R. G. Payne;
Belhus Park, Aveley, South Essex (VC 18), TQ 572823, 11.v.1983, C. W. Plant;
Ebbor, Somerset (VC 6), 20.v.1983, R. M. Payne (Bristol City Museum);
Windsor Great Park, Berkshire (VC 22), SU 9584, 9.v.1984, D. J. Gibbs;
Sizewell Belts SSSI, East Suffolk (VC 25), TM 4664, 1X, 29.v.1989, C. W. Plant;
Emblems Coppice, Hatfield Forest, North Essex (VC 19), TL 5218, 21.iv.1990, C. W.
Plant.
Vange Marshes, South Essex (VC 18), TQ 721865, 25.v.1990, R. G. Payne;
Lower Woods, Gloucestershire (VC 34), ST 7488, 8.v.1999, D. J. Gibbs;
Hartslock, Oxfordshire (VC 23), 24.iv.2000, C. M. T. Raper;
Hitterhill Coppice, Wyre Forest, Worcestershire (VC 37), SO 771763, 15.v.2000,
R. G. Payne.

For ease of interpretation, these records are mapped by vice county in Figure 1.

Ecology

The larval requirements of *C. ranunculi* are currently unknown, though Doczkal (*op. cit.*) suggests a possible association with *Ranunculus bulbosus*. Roger Payne (pers. comm.), reports that all three of the sites listed above where he found *Cheilosia ranunculi* were of a marshy character, dominated by rushes *Juncus* spp., and with both *Ranunculus acris* and *R. repens* plants present.

Cheilosia albitarsis sensu Doczkal has been taken by both of us, and by Roger Payne, at several localities where *C. ranunculi* was also recorded on the same visit and so it is clear that the two species fly together.

Abundance

From the information so far available, it seems as if *C. ranunculi* is a scarcer species in Britain than *C. albitarsis*, with the latter rather more frequent in recent collections than the former. Roger Payne (pers. comm.) found five males amongst his total collection of 33 specimens; CWP identified three males from his collection of 41 British *albitarsis sensu* Meigen and amongst European material only three from seventeen Hungarian specimens were *ranunculi*.

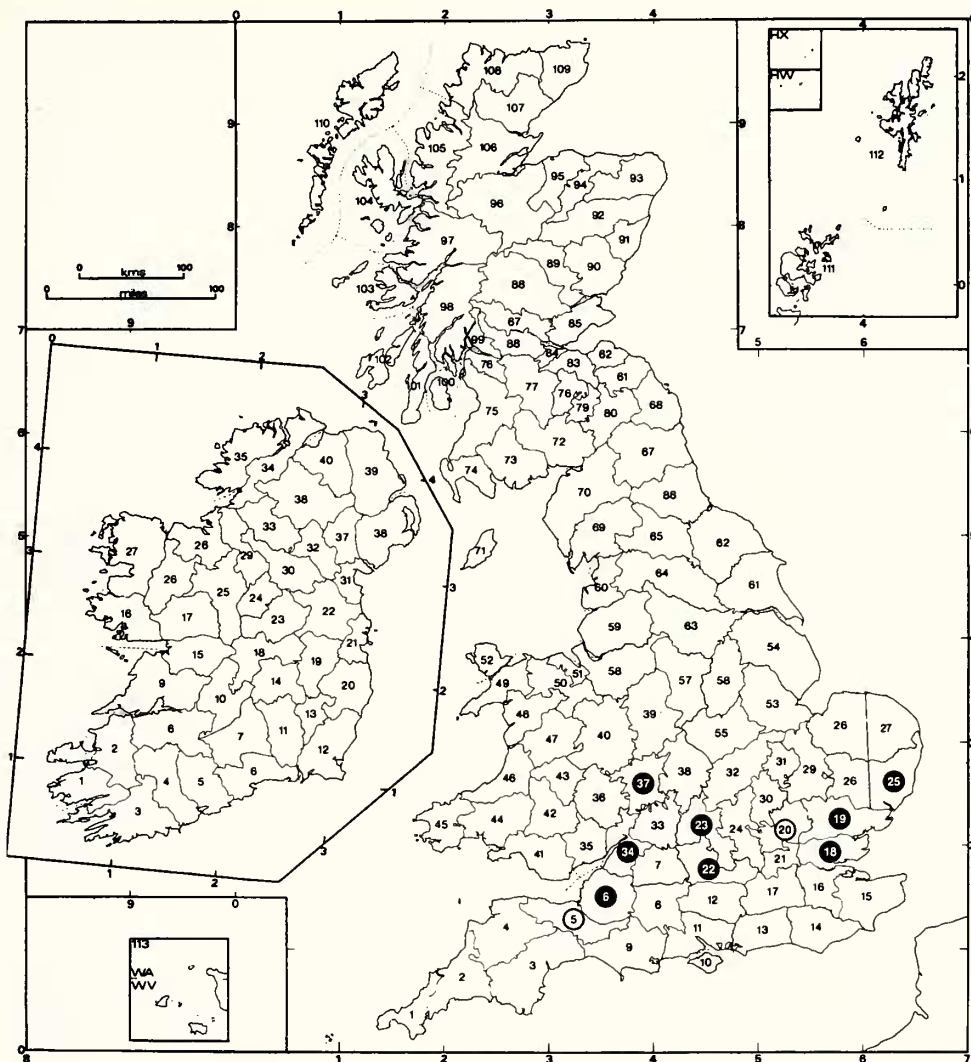


Fig. 1. Distribution by vice county of known records of *Cheilosia ranunculi* Doczkal (Syrphidae) in the British Isles at March 2001. For records made prior to 1980 the vice county number is encircled; for records made from 1980 onwards, the vice county number is shown in white within a black dot.

However, this is not the case in the older collections, at least judging by the collections in the Bristol City Museum. Specimens collected by Watkins at the end of the 19th century and by Audcent in the first part of the 20th century indicate a presence in equal numbers. This suggests that *C. ranunculi* has declined over the last 50 years so may have more specialist habitat requirements.

Identification

Two external characters are noted by Doczkal as being reliable for the separation of males (although he notes that specimens of *albitarsis* from southern Europe may lack the black hairs on T2). However, whilst these characters are sometimes repeated in the females there is some variation and it is suggested by him that females cannot be reliably separated on present knowledge. Records of the two segregate species submitted to the British

Isles Recording Scheme should, therefore, be based only on males and the sexes should be stated in reports so that the identifications are clear.

The following key is adapted from Doczkal (*op. cit.*) to which the reader is referred for greater detail. Care should be exercised when examining the hairs on the thoracic dorsum. Pale hairs can be very difficult to discern in some individuals and light reflecting off black hairs can sometimes make them appear pale when they are not so.

- 1 Antero-lateral corners of tergite 2 with at least one black hair (at least in northern populations), sometimes several. Thoracic dorsum entirely black haired..... *albitarsis* ss Doczkal
- Antero-lateral corners of tergite 2 entirely pale-haired with absolutely no black hairs at all. Thoracic dorsum with a narrow band of pale hairs at the anterior end *ranunculi* Doczkal

We strongly urge that all specimens in this group should have their identification confirmed by examination of the genital surstyli (Fig. 2). This is practical without complicated preparation in most pinned specimens if the genital capsule is hinged out when the specimen is set (as one does for *Sphaerophoria* species), and held in place by a micro pin or similar until set. The surstyli should be easily visible in such specimens.

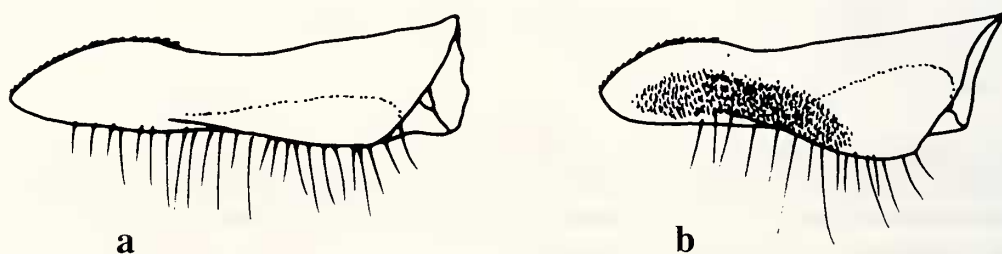


Fig. 2. Dorsal views of surstyli. a. *Cheilosia ranunculi* (Lower Woods, Gloucestershire); b. *Cheilosia albitarsis* (Max Bog, Somerset), stippling on outer surface represents fine, pale microtrichia.

Acknowledgements

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References

- Doczkal, D., 2001. Description of *Cheilosia ranunculi* spec. nov. from Europe, a sibling species of *C. albitarsis* Meigen (Diptera, Syrphidae). *Volucella* 5: 63-78).
- Gibbs, D., 2000. Are there two species confused under *Cheilosia albitarsis*? *Hoverfly Newsletter*, number 30: 4-5.